IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : SHUICHI SAKANOUE ET.AL.

Serial No. : 09 / 926,106

Filed : September 4, 2001

For : REFRIGERATING MASHINE OIL COMPOSITION

Art Unit & Examiner : 1764, Ellen M McAvoy

DECLARATION UNDER 37 CFR 1.132

Honorable Commissioner of Patents and Trademarks

Washington,D.C. 20231

Sir:

I, the undersigned Masato Kaneko, do hereby declare:

That I completed the master's course in the faculty of engineering in Gunma University in March 1981, entered Idemitu Kosan Co., Ltd. in April in that year, and since October 1983, have occupied in a research and deveropment in lubricating oil, chiefly in lubricating oil for refrigerator oil, up to now;

That I have a good konwlege of the English language and have read and understood the application papers and the Examiner's Office Action as well as the references cited therein in the prosecution of the above identified patent application; and

That , in order to show the difference between the subject matter of references and the subject matter of the application, the following experiment was carried out.

Experiment

The base oil used herein is polyvinyl ethyl ether (a) / polyisobuthyl ether (b) random copolymer [unit(a) / unit(b) = 9/1 ; kinematic viscosity 68 mm^2 / sec

(40℃) ; number average molecular weight 720] . To the base oil, following additives were added as shown in following table to prepare refrigerator oil compositions.

additive 1 : glycerin mono oleate

additive2 - 1: tricresyl phosphate(TCP)

additive2 - 2: trioctyl phosphate (TOP)

additive2 - 3: dioctyl hydrogen phosphite (DOHP)

additive2 - 4: oleyl acid phosphate amine salt

additive3 : other Additives(antioxidant,acid-trapping agent, and deforming agent)

The compositions were tested for there lubricity in an extreme pressure region (extreme pressure lubricity) and in an oil region(oil region lubricity), in accordance with the same methods as in the present specification. The results are shown in the following table together with the data of Example 1 in our specification.

Table

Example	A	B	C	Example 1
Blend Ratio (wt%)				
additive 1:	0.5	0.5	0.5	0.5
additive2 – 1	0.01			
additive2 – 2		0.01		
additive2 –3			0.01	
additive2 – 4				0.01
additive 3:	0.7	0.7	0.7	0.7
Extreme Pressure Lubricity: abration loss (mm)	0.65	0.67	0.58	0.47
Oil-Region Lubricity : abration loss (mm)	1.6	1.6	1.6	1.5
Volume Resistivity (Ω / cm)	5×10^{13}	5×10^{13}	5×10^{13}	5×10^{13}

Discussion

As is clear from the comparison between the results of Example 1, and the results of Example A~C. Example 1 wherein phosphate is an acid phosphate is unexpectedly better than Example A~C wherein phosphate is not acid phosphate.

I declare further that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Masato Kaneko

Masato Kaneko

Date: September 27, 2004